

UNIVERSITY OF MARYLAND
Department of Physics
College Park, Maryland

Curriculum Vitae (March 2000)

Robert L. Gluckstern
Professor

I. EDUCATION

1940 - 44 CCNY, Electrical Engineering, BEE 1944
1946 - 48 MIT, Physics, Ph.D. 1948

II. EXPERIENCE IN HIGHER EDUCATION

A. Teaching and Research

1950 - 51 Research Associate, Yale University
1951 - 57 Assistant Professor, Yale University
1957 - 64 Associate Professor, Yale University
1969 Visiting Professor, Tokyo University
1964 - 75 Professor, Department of Physics and Astronomy,
University of Massachusetts/Amherst
1975 - 97 Professor, Department of Physics and Astronomy
University of Maryland/College Park
1997 Professor of Physics, Emeritus

B. Administrative

1964 - 69 Head, Department of Physics and Astronomy
University of Massachusetts/Amherst
1969 - 70 Associate Provost, University of Massachusetts/Amherst
1970 - 75 Vice Chancellor for Academic Affairs and Provost,
University of Massachusetts/Amherst
1975 - 82 Chancellor, University of Maryland/College Park
1997 President Emeritus, University of Maryland/College Park

III. EXPERIENCE OTHER THAN HIGHER EDUCATION

1944 - 46 U.S. Navy, Electrical Engineering, NACA, Moffett Field, California

IV. PUBLICATIONS

See attached bibliography - about 80 publications in major referred journals

V. PROFESSIONAL ACTIVITIES AND CONSULTANTSHIPS

A. Related to Physics

- 1957 - 58 Physical Sciences Study Committee (PSSC), Cambridge, Massachusetts. Participant in development of a new Text Book for High School Physics, supported by NSF. (Consultant to Committee).
- 1958 - 61 Lawrence Radiation Laboratory, Livermore, California, to participate in the ASTRON project for the development of energy from Controlled Thermonuclear Reactions (part of Project Sherwood -- peaceful uses of nuclear energy).
- 1962 - 72 Visiting Scientist Program in Physics (American Institute of Physics).
- 1963 - 85 Brookhaven National Laboratory, Upton, New York. Consultant and Visiting Senior Scientist at Brookhaven National Laboratory. Advanced Accelerator Design and Development. Participant in design of Alternating Gradient Synchrotron; participant in design of linear accelerator injector for Modification Program; participant in design study for Intersecting Storage Ring Accelerator; advised on theoretical problems in nonlinear orbit dynamics, linac structure problems, and effects of high intensity.
- 1967 - 70 Lawrence Radiation Laboratory, Berkeley, California. Participant in design of 100 GeV Proton Synchrotron; advised on Theoretical problems in non-linear orbit dynamics, linac structure problems, and effect of high intensity.
- 1968 - 70 National Accelerator Laboratory, Batavia, Illinois. Participant in design of 400 GeV Proton Synchrotron; advised on theoretical problems in non-linear orbit dynamics, linac structure problems, and effects of high intensity.
- 1971 - 75 Member, MIT Linac Policy Advisory Board.
- 1974 Member, NSF-AEC Panel charged with recommending national priorities for long range funding of medium energy physics laboratories.
- 1975 Member, NSF Visiting Committee for Stanford Superconducting Recirculating Linear Accelerator.
- 1977 - 78 Member, NSF Management Review Committee on the Very Large Array.
- 1977 - 83 University of Maryland Representative on University Research Associates Council of Presidents.

1977	Participant, Workshop at Brookhaven National Laboratory on National Synchrotron Light Source Facility and Heavy Ion Fusion.
1978 - 83	New England Nuclear Corporation -- Consultant on Accelerator Theory.
1978 - 81	Physical Dynamics -- Consultant on Accelerator Theory.
1979 - 81	Associate -- La Jolla Institute.

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1979 - 83	Member, Executive Committee, URA Council of Presidents
1980	Chairman, Nominating Committee, URA Council of Presidents.
1981 - 82	Member, Council of Presidents, Southeastern Universities Research Association.
1981 - 82	Vice Chairman, Universities Research Association Council of Presidents.
1981	Committee member, Advisory Committee for the 148th Annual Meeting of the American Association for the Advancement of Science.
1982 - 83	Chairman, Universities Research Association Council of Presidents.
1982, 1985 (Spring)	Member, Physics Qualifying Exam Committee (UMCP).
1983 (Fall)	Chairman, Physics Qualifying Exam Committee (UMCP).
1984 - 87	Member, NSF Advisory Committee for Physics.
1984	Member, DOE Advisory Committee for E.O. Lawrence Award in Physics.
1984	Spring, Sabbatical Semester at KEK, Japan and FNAL in Batavia, IL.
1984 - 87	Consultant to Accelerator Department, Fermilab, on problems in accelerator theory.
1984	Member, Physics Colloquium Committee (UMCP).
1984	Member, SURA Advisory Committee (UMCP).
1981, 86 - 89	Member, URA Visiting Committee for FNAL.
1986 - 88	Member, APS Advisory Committee on the Washington Meeting.
1986 - 88	Member, Academic Planning and Research Committee (UMCP).

- 1986 Member, Organizing Committee for 1987 Particle Accelerator Conference, Washington, DC.
- 1986 Member, Program Committee for 1987 Particle Accelerator Conference, Washington, DC.
- 1987 - 88 Member, Planning Committee, 1988 Linac Conference, Williamsburg, VA.
- 1988 Member, Program Committee for the APS Meeting in Baltimore, April 1988.
- 1988 Member of Visiting Committee, Physics Department, University of Wyoming.

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- *1964 - Los Alamos Scientific Laboratory (Consultant). Participant in design of 800 MeV Linear Accelerator; advised on theoretical problems in non-linear orbit dynamics, linac structure problems, and effects of high intensity.
- 1985 - 90 Member, Committee for CTP (UMCP).
- *1986 - Member, SURA Board of Trustees.
- 1986 - 91 Chairman, SURA Science and Technology Committee.
- 1992 - 93 Vice Chairman, SURA Board of Trustees
- 1994 - 95 Chairman, SURA Board of Trustees
- *1986 - Member, SURA Executive Committee.
- *1987 - Consultant to Nat'l Synchrotron Light Source, BNL on wigglers and FEL's.
- 1988 - 89 Member, Organizing Committee for 1989 Particle Accelerator Conference, Chicago, IL.
- 1988 - 91 Member, Steering Committee, Beam Physics Division of the APS.
- 1988 - 91 Chairman, Publications Committee, Beam Physics Division of the APS.
- 1988, 1990 Lead Reviewer on Accelerators for the NSF Science and Technology Centers.

- 1988 - 90 Member, Appointments Promotion, Tenure Committee of Physics Department.
- 1989 - 91 Member, APS Publication Committee
- 1989 - 90 Member, Planning Committee, 1990 Linac Conference, Albuquerque, NM.
- 1989 - 91 Chairman, Physics Council and Physics Department Executive Committee.
- 1989 - 91 Member, Select Panel to Review Physical Review Letters.
- 1990 - 93 Member, HEPAP.
- 1990 - 93 Member, Member, AT Division Advisory Board (LANL)
- 1991 - 92 Member, Planning Committee, 1992 Linac Conference, Ottawa, Canada.
- 1991 - 93 Member, Board of Overseers for S.S.C. Laboratory.
- * 1991 - Member, Physics Department Visiting Committee, MIT.
- 1991 - 93 Consultant to SLAC on Beam Dynamics.

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- 1992 - 93 Member, Physics Department Salary Committee
- 1993 - 94 Chair, Physics Department Salary Committee
- 1993 - 94 Member, Planning Committee, 1994 Linac Conference, KEK, Japan
- * 1995 - Member, Organizing Committee, 1996 Linac Conference, CERN, Switzerland, 1998 Linac Conference.
- * 1994 - Member, AOT Division Advisory Board (LANL).
- 1995 - 96 Member, HEPAP Subcommittee on Accelerator R&D.
- * 1995 - Member, Center for Accelerator Physics Review Committee, BNL.

*New or continuing assignments.

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B. Related to Administrative Responsibility

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| 1975 | Member, Committee on Balance of Payments for New England Board of Higher Education. |
| 1976 - 82 | Member, NASULGC Committee on Veterans' Affairs. |
| 1976 - 77 | Member, Subcommittee of the Maryland State Board of Higher Education to Study the Financing of Higher Education in Maryland during the period 1976-81. |
| 1977 - 79 | Member, Board of Directors, Washington Center for Learning Alternatives, a non-profit organization which serves as a national clearinghouse for student intern placements in the Washington, D.C. area. |
| 1978 | Member of a delegation of University Presidents and Chancellors to visit educational, economic, and agricultural institutions in Taiwan, April 1978. |
| 1979 - 87 | Chairman, Selection Committee for Rhodes Scholar, Maryland/D.C. Region. |
| 1980 | Member of a delegation of University officials to visit institutions in Egypt, July 1980. |
| 1980 | Committee member, Middle States Association of Colleges and Schools (CHE Commission on Higher Education) special committee to study the relationship between intercollegiate athletics and accreditation. |
| 1981 - 82 | Chairman, NASULGC Committee on Veteran's Affairs. |
| 1981 | Head of a delegation of University of Maryland officials to visit institutions in the Peoples' Republic of China, May 1981. |
| 1982 | Member, Middle States Association Team to Reaccredit Polytechnic Institute of New York, March 1982. |
| 1984 | Member, Middle States Association Team to Reaccredit NYU, March 1984. |
| 1985 | Chair, Middle States Association Team to Reaccredit RPI. |
| 1987 | Member, Middle States Association Team to Reaccredit the CUNY Graduate Center. |

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VI. HONORS AND AWARDS

1946 - 48	DuPont Pre-Doctoral Fellow MIT
1948 - 49	AEC Post Doctoral Fellowship, University of California
1949 - 50	AEC Post Doctoral Fellowship, Cornell University
1961 - 62	Yale Faculty Fellowship, CERN, Geneva, Switzerland
1998	Particle Accelerator School Prize for Research
1998	President's Medal for Service to UMCP

VII. THESES DIRECTED

Walter Huebner, Ph.D. 1959, Yale University (jointly with Professor Gregory Breit), "I. Equivalent Potentials in One Dimensional Problems; II. Precision Calculation of the Non-Relativistic Wave Function of the Ground State of Orthohelium".

Yukap Hahn, Ph.D. 1962, Yale University (jointly with Professor Gregory Breit), "The Theory of Hyperfine Structure of the Ground State of Orthohelium".

Alexander J. Glass, Ph.D. 1963, Yale University (jointly with Professor Gregory Breit), "The Hyperfine Structure of the Ground States of Ionized Helium and of Orthohelium".

Mark Taylor, Ph.D. 1968, University of Massachusetts/Amherst, "Scattering of Polarized Electrons by Nuclei with Magnetic Moments".

Willard Jule, Ph.D. 1973, University of Massachusetts/Amherst, "Equivalent Circuit for Perturbed Multicell Structure".

Rui Li, Ph.D. 1990, University of Maryland, College Park, "Analytic and Numerical Investigation of the Longitudinal Coupling Impedance".

John Diamond, M.S. 1990, University of Maryland, College Park, "Penetration of Electrostatic and Magnetostatic Fields Through Circular Holes in a Conducting Wall of Finite Thickness".

William Detlefs, M.S. 1991, University of Maryland, College Park, "Longitudinal Coupling Impedance of a Thin Iris in a Beam Pipe".

Wen-Hao Cheng, Ph.D. 1995, University of Maryland, College Park, "Beam Dynamics of the Alternating Phase Focusing Linac and Dependence of the Penetration of Electromagnetic Fields Through a Small Coupling Hole in a Thick Wall on Frequency".

Shicheng Jiang, Ph.D. 1996, University of Maryland, College Park, "An Analytical and Numerical Investigation of the Coupling Impedance of Irises in a Beam Pipe".

Alexei V. Fedotov, Ph.D. 1997 (expected), University of Maryland, College Park,
"Longitudinal Coupling Impedance of a Hole in the Accelerator Beam Pipe at Finite
Frequencies".

VIII. GRANT AND CONTRACTS

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| 1963 - 73 | NSF, Principal Investigator of grant for theoretical studies in nuclear physics and the theory of high energy particle accelerators. |
| 1965 - 70 | ARPA, Principal Investigator of grant for optical research equipment. |
| 1968 | NSF, Principal Investigator of grant to support Eastern Theoretical Physics Conference at University of Massachusetts. |
| 1965 - 69 | Faculty Research Grants to support graduate student recruiting at University of Massachusetts. |
| 1969 | Japanese Society for Promotion of Sciences, Grant to travel and lecture in Japan. |
| 1965, 1969, 1977 | NSF, Foreign Travel Grants to present papers at International Conference in Italy, Soviet Union. |
| 1982 - 83 | DOE Co-Principal Investigator of Contract No. DE-AS05-80ER10666, Advanced Methods for the Computation of Particle Beam Transport and the Computation of Complicated Electromagnetic Fields in Cavities and Magnets, August 1982 - January 1984. |
| 1984 - 86 | DOE Co-Principal Investigator of Contract No. DE-AS05-80ER10666, A2, Advanced Methods for the Computation of Particle Beam Transport and the Computation of Complicated Electromagnetic Fields in Cavities and Magnets, February 1984 - January 1986. |
| 1986 - 89 | DOE Co-Principal Investigator of Contract No. DE-AS05-80ER10666, Advanced Methods for the Computation of Particle Beam Transport and the Computation of Electromagnetic Fields and Beam-Cavity Interactions, February 1986 - January 1989. |
| 1989 - 92 | DOE Co-Principal Investigator of Contract No. DE-AS05-80ER10666, Advanced Methods for the Computation of Particle Beam Transport and the Computation of Electromagnetic Fields and Beam-Cavity Interactions, February 1989 - January 1992. |
| 1992- 95 | DOE Co-Principal Investigator of Contract No. DEFG05-92ER40748, Advanced Methods for the Computation of Particle Beam Transport and the Computation of Electromagnetic Fields and Beam-Cavity Interactions, November 1992 - November 1995. |

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IX. UNIVERSITY SERVICE OTHER THAN TEACHING

- 1982 - 85 Member, University of Maryland Chorus.
- * 1982 - Member, Advisory Board, Center for Renaissance and Baroque Studies.
- 1982 - 85 Member, Athletic Council.
- 1986 - 87 Chair, Search Committee for Chair of Music Department.
- *1991 - Member, China Committee.
- * 1992 - Member, Anhui Sister State Committee
- 1992 Chair, Provost Search Committee
- * 1993 Member, CAPA Board

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X. COURSE TAUGHT AT UNIVERSITY OF MARYLAND/COLLEGE PARK

Fall 1975	Physics 262H	(Recitation Only)
Spring 1976	Physics 161H	" "
Fall 1976	Physics 262H	" "
Spring 1977	Physics 161H	(Honor Seminar on Accelerators)
Fall 1977	Physics 262H	(Recitation Only)
Spring 1978	Physics 161H	" "
Fall 1978	Physics 262H	" "
Spring 1979	Physics 263H	" "
Fall 1979	Physics 262H	" "
Spring 1980	Physics 263H	" "
Fall 1980	Physics 262H	" "
Spring 1981	Physics 263H	" "
	Math 220	" "
Fall 1981	Physics 263H	" "
	Math 220	" "
Spring 1982	Physics 263H	" "
	Math 221	" "
Fall 1982	Physics 487	
	Math 220	(Recitation Only)
Spring 1983	Physics 117	
	Physics 719	
Fall 1983	Physics 604	
	Physics 719	
Spring 1984	Sabbatical	
Fall 1984	Physics 604	
Spring 1985	Physics 606	
Fall 1985	Physics 604	
Spring 1986	Physics 606	
	Physics 719	
Fall 1986	Physics 604	
	Physics 719	
Spring 1987	Physics 606	
	Physics 719	
Fall 1987	Physics 606	
	Physics 719	
Spring 1988	Physics 487	
	Physics 719	
Fall 1988	Physics 262	
	Physics 719	
Spring 1989	Physics 161	
	Physics 719	
Fall 1989	Physics 607	
	Physics 719	

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Spring 1990	Physics 161 Physics 719
Fall 1990	Physics 607 Physics 719
Spring 1991	Physics 161 Physics 719
Fall 1991	Sabbatical
Spring 1992	Physics 607 Physics 719
Fall 1992	Physics 263 Physics 719
Spring 1993	Physics 604 Physics 719
Fall 1993	Physics 262 Physics 719
Spring 1994	Physics 263H Physics 606 Physics 719
Fall 1994	Physics 607 Physics 719
Spring 1995	Physics 410 Physics 719
Fall 1995	Physics 411 Physics 719
Spring 1996	Physics 410 Physics 719
Fall 1996	Physics 411 Physics 719
Spring 1997	Physics 121